

Case 2932

***Hapalotrema* Looss, 1899 (Digenea): proposed designation of *H. loossi* Price, 1934 as the type species**

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Abstract. The purpose of this application is to designate the nominal species *Hapalotrema loossi* Price, 1934, a spirorchid parasite of marine turtles, as the type species of the blood fluke genus *Hapalotrema* Looss, 1899. At present the type species is *Distoma constrictum* Leared, 1862, but this is due to a misidentification and the genus was based on material later named *H. loossi*. The name *H. mistroides* (Monticelli, 1896) is a senior subjective synonym of *H. loossi*.

Keywords. Nomenclature; taxonomy; Trematoda; Digenea; *Hapalotrema*; *Hapalotrema loossi*; *Hapalotrema mistroides*.

1. Leared (1862, p. 169) described and figured a spirorchid (digenean) blood fluke *Distoma constrictum* from the heart of the 'edible or common' turtle (probably *Chelonia mydas* (Linnaeus, 1758)) from an unstated locality. No type specimens are known.

2. Monticelli (1896, p. 144) placed what he believed to be Leared's species in the genus *Mesogonimus* Monticelli, 1888; he stated that Leared's name was preoccupied by *Distomum* [sic] *constrictum* Mehlis (in Creplin, 1846, p. 142) but he did not provide an explicit replacement name; he may have considered that homonymy was resolved by his generic separation of the species, but in any event the Mehlis name, listed without any description or reference, is a nomen nudum and so not available as a senior homonym of *constrictum* Leared.

3. Monticelli (1896) described '*Mesogonimus constrictus* Leared' using specimens from the loggerhead turtle *Thalassochelys caretta* (Linnaeus, 1758) captured near Naples, Italy. On p. 144 he noted 'Per questo suo caratteristico aspetto, qualora avesse dovuto cambiar nome specifico, il distomide del Leared avrebbe potuto meritar quello *mistroides* ...'. Translated, this is a suggestion that *mistroides* might be a more descriptive and appropriate name because his specimens had a posterior end shaped like a spoon or scoop (Greek 'mystron'). However, the name *mistroides* was never used again in Monticelli's text or illustrations (figs. 1-3 and 19), where the species was always called *M. constrictus*. Since *mistroides* was not adopted as valid or proposed, even conditionally, as a replacement name for *constrictus* it was not made available by Monticelli.

4. Looss (1899, p. 656) erected the genus *Hapalotrema*, basing it on material which he considered to be *Distoma constrictum* Leared, 1862 and *Mesogonimus constrictus* sensu Monticelli, 1896. He provided a detailed description (pp. 750-752) and illustrations (pl. 30; figs. 72, 73) of specimens collected in Egypt from *Thalassochelys corticata* (= *T. caretta*). His material is strikingly similar to that reported by Monticelli but quite distinct from Leared's; however, under the Code the type species of *Hapalotrema* is the nominal species *Distoma constrictum* Leared, 1862 by monotypy and original designation.

5. Stiles & Hassall (1908, p. 279) listed *Hapalotrema mistroides* (Monticelli, 1896) without comment, giving '*Mesogonimus constrictus* (Leared) Monticelli' as a synonym. This adoption of *mistroides* as valid makes the specific name available from Monticelli, 1896 (Article 11e of the Code).

6. Price (1934) described several new genera and species of blood flukes, including specimens remarkably similar to Leared's (para. 1 above) from a captive green turtle (*Chelonia mydas*). Price (p. 138) provided the [unnecessary: see para. 1 above] replacement specific name *europaeus* for *Distoma constrictum* Leared and placed this species in his new genus *Learedius* (p. 136; type species *L. learedi* Price, 1934). He applied the name *Hapalotrema mistroides* to Monticelli's specimens, and created (p. 139) the new name *H. loossi* for those of Looss (para. 4 above).

7. Since the time of Looss (1899) his genus *Hapalotrema* has been treated as valid by all spirorchid specialists, and the concept of the genus has been based on his material (i.e. *H. loossi* Price, 1934). Authors using *Hapalotrema* include Stunkard (1923), Price (1934), Byrd (1939), Yamaguti (1958; 1971) and Smith (1972); there is a considerable literature on diseases and parasites of turtles and we have given to the Commission Secretariat a list of a further 29 references up to 1993. As explained above, however, Looss (like Monticelli before him) misidentified his specimens and the type species is formally *Distoma constrictum* Leared, 1862 (= *Learedius europaeus* Price, 1934), which in our opinion cannot be identified with any particular known taxon. In the interest of stability we refer this case to the Commission under Article 70b of the Code and propose that *H. loossi* be designated as the type species of *Hapalotrema*.

8. One of us (T.R.P.) has examined Looss's material in the Swedish Museum of Natural History (slides 1570, 1571, 1840, 1843, 1855, 2663-2666, plus one slide with no number containing an entire fluke in serial section). This material was included by Price (1934) in *H. loossi*, and we here designate the specimen on slide 2663 as the lectotype of this nominal species.

9. It appears that none of Monticelli's material (para. 3 above) survives, so that there are no existing type specimens of *H. mistroides*. Nevertheless we, like earlier authors, consider it probable that Monticelli was dealing with the species described from the same host (but a different locality) by Looss, so that the valid name of the taxon is *H. mistroides* (Monticelli, 1896). Since the synonymy is only subjective we do not propose the suppression of the name *H. mistroides* or the designation of a specimen of *H. loossi* as a neotype of *H. mistroides*.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Hapalotrema* Looss, 1899, and to designate *Hapalotrema loossi* Price, 1934 as the type species;

- (2) to place on the Official List of Generic Names in Zoology the name *Haplotrema* Looss, 1899 (gender: neuter), type species by designation in (1) above *Haplotrema loossi* Price, 1934 (a junior subjective synonym of *Mesogonimus mistroides* Monticelli, 1896);
- (3) to place on the Official List of Specific Names in Zoology the name *mistroides* Monticelli, 1896, as published in the binomen *Mesogonimus mistroides* (senior subjective synonym of the specific name of *Haplotrema loossi* Price, 1934, the type species of *Haplotrema* Loos, 1899).

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References

- Byrd, E.E. 1939. Studies on the blood flukes of the family Spirorchidae. Part II. Revision of the family and description of new species. *Journal of the Tennessee Academy of Sciences*, **14**: 116–161.
- Creplin, [F.C.H.]. 1846. Nachträge zu Gurlt's Verzeichniss der Thiere, bei welchen Entozoen gefunden worden sind. *Archiv für Naturgeschichte*, **12**: 129–160.
- Leared, A. 1862. Description of a new parasite found in the heart of the edible turtle. *Quarterly Journal of the Microscopical Society*, (n.s.)**2**: 168–170.
- Looss, A. 1899. Weitere Beiträge zur Kenntniss der Trematoden-Fauna Aegyptens, zugleich Versuch einer natürlichen Gliederung des Genus *Distomum* Retzius. *Zoologische Jahrbücher* (Jena), **12**: 521–784.
- Monticelli, F.S. 1896. Di un enatozoo della *Thalassochelys caretta* Linn. *Internationale Monatsschrift für Anatomie und Physiologie* (Leipzig), **13**: 141–172.
- Price, E.W. 1934. New genera and species of blood flukes from a marine turtle, with a key to the genera of the family Spirorchidae. *Journal of the Washington Academy of Sciences*, **24**: 132–141.
- Smith, J.W. 1972. The blood flukes of cold-blooded vertebrates and some comparison with the schistosomes. *Helminthological Abstracts*, **41**: 161–204.
- Stiles, C.W. & Hassall, A. 1908. Index-catalogue of medical and veterinary zoology. Subjects: Trematoda and trematode diseases. *United States Public Health and Marine-Hospital Service, Hygienic Laboratory Bulletin*, no. 37. 401 pp.
- Stunkard, H.W. 1923. Studies on North American blood flukes. *Bulletin of the American Museum of Natural History*, **48**: 165–221.
- Yamaguti, S. 1958. *Systema Helminthum*, vol. 1. The digenetic trematodes of vertebrates. Part 1. xi, 979 pp. Interscience Publishers, New York.
- Yamaguti, S. 1971. *Synoptical review of life histories of digenetic trematodes of vertebrates*. 1100 pp. Keigaku Publishing, Tokyo.